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Thank you, Mr. Chairman. It's a pleasure to be here today to discuss Title V of the Homeland Security Act as it applies to the National Nuclear Security Administration (NNSA) at the Department of Energy (DOE).

The President's proposal to organize the Department of Homeland Security (DHS) is at once visionary and down-to-earth. It will significantly improve the way the government responds to threats against the United States. Centralizing responsibility for our response to weapons of mass destruction will leverage resources currently spread across the government. The President's plan simply makes good sense. We at NNSA are proud of our role in the fight against terrorism, and we look forward to working with Congress and the Administration to make a smooth transition to a new department.

The Department of Energy (DOE) / National Nuclear Security Administration (NNSA) develops and attracts the world's premiere nuclear scientists, technicians, and nuclear weapon designers as a result of over 50 years of managing the nation's nuclear weapons program. Many of these capabilities and assets have been applied toward homeland security and counter terrorism challenges long before 9/11, as well as since then.

Under the Atomic Energy Act of 1954, as amended, the Federal Bureau of Investigation (FBI) is responsible, within the United States, for investigating illegal activities involving the use of nuclear materials, including terrorist threats involving the use of special nuclear materials. Executive Order 12656 provides authority for DOE to assist the FBI in conducting, directing, and coordinating search and recovery operations for nuclear materials, weapons, or devices, and assisting in identifying and deactivating an Improvised Nuclear Device (IND) or a Radiological Dispersal Device (RDD). Today's operations have been updated to address the threat of terrorists using weapons of mass destruction (WMD). When requested DOE/NNSA response teams are activated and deploy to support resolution of the WMD crisis.

Under the Bill to establish the Department of Homeland Security, the new Secretary would coordinate responses to WMD incidents, including nuclear and/or radiological support function. We do not anticipate that the DOE/NNSA capabilities or response to a nuclear/radiological accident or incident will be compromised in any way by this transfer of responsibility.

Through tailored and responsive teams, DOE/NNSA is able to marshal highly trained and unique scientific and technical expertise in support of the Lead Federal Agency (LFA). This expertise is made up of 70 full time and 870 part time personnel that draws from across the nuclear weapons complex and is composed of 29 full time and 118 part time Federal officials; 29 full time and 320

part time National Laboratory staff; and, 11 full time and 450 part time contractor staff.

Although nearly 900 individuals are involved with the nuclear/radiological incident response teams, through extensive matrixing and leveraging of resources, the cost to the government is only equivalent to 212 full time employees. This matrixing makes the response programs stronger and keeps the costs very low. The response teams are staffed with volunteers who, for the most part, work on ensuring the safety and reliability of the Nation's nuclear stockpile day in and day out. These professionals respond to staff a response team when called, much like a volunteer firefighter, or a National Guard member.

Individuals from fifteen various DOE/NNSA sites/facilities or National Laboratories across the nation are on call to respond in the event of a nuclear/radiological incident or emergency. The ability to call upon professionals from across the weapons complex brings depth to the nuclear/radiological response programs. The full depth and breadth of the weapons complex experience and staffing are brought to bear in the event of a significant incident or an emergency.

The capabilities of the response programs are improved because of the cutting edge knowledge of the stockpile stewardship program that these scientists bring with them when they respond to a call. This knowledge is gained over years of working with the stockpile stewardship program on a daily basis and cannot be duplicated - neither to replace the scientists on the response teams nor on the stockpile stewardship program. These very unique scientific/technical resources are extremely limited. Only the fundamental concepts of the stockpile stewardship programs are taught in a university. Many years of hands on work, in some cases going back to the Manhattan Project, provides knowledge, insights and background to draw upon that are invaluable.

The Nuclear/Radiological Incident Response Programs

As the steward of the nation's nuclear weapons program, DOE/NNSA brings the knowledge and expertise of the world's leading nuclear scientists, technicians, and nuclear weapon designers in response to a significant nuclear/radiological incident or emergency. When the need arises, DOE/NNSA is prepared to respond immediately anywhere in the world with seven unique response capabilities.

The response capability most widely known of is the Nuclear Emergency Support Team (NEST). The NEST program was initiated in 1974 as a means to provide technical assistance to the Lead Federal Agency (LFA). NEST is our program for preparing and equipping specialized response teams to deal with the technical aspects of nuclear or radiological terrorism. NEST capabilities include search for and identification of nuclear materials, diagnostics and assessment of suspected nuclear devices, technical operations in support of render safe procedures, and packaging for transport to final disposition. NEST response team members are drawn from throughout the nation's nuclear weapons complex. Response teams vary in size from a five person technical advisory team to a tailored deployment of dozens of searchers and scientists who can locate and then conduct or support technical operations on a suspected nuclear device. NEST personnel and equipment are ready to deploy worldwide at all times.

A Nuclear/Radiological Advisory Team deploys as part of an FBI-led Domestic Emergency Support Team (DEST) or as part of a State Department-led Foreign Emergency Support Team (FEST) if an incident occurs overseas to provide nuclear scientific and technical advice to the LFA.

If the location of a suspected nuclear or radiological device is not known, search operations may be required. NEST search teams are routinely configured to detect and locate a radiological source using a variety of methods ranging from

hand-carried to vehicle-mounted search equipment. The basic building block for NEST search operations is the Search Response Team (SRT). The Search Response Team is prepared to deploy on either civilian or military aircraft. Upon arrival on-scene, the Search Response Team can begin searching immediately or can equip and train local responders, who are already familiar with the search area.

When a device is located, the specific resolution is dependent upon the political, technical, and tactical situation. The ultimate goal in resolving a nuclear terrorism crisis is to keep the terrorist device from producing a nuclear yield. This involves special explosive ordnance disposal (EOD) procedures conducted by highly-trained technical personnel. DOE/NNSA Joint Technical Operations Teams have been designated to work with military EOD teams during all phases of the crisis response. This approach also draws upon the personnel and equipment resources of the Accident Response Group (ARG).

The Accident Response Group (ARG) mission is to manage the resolution of accidents or significant incidents involving nuclear weapons that are in DOE's custody at the time of the accident or incident. ARG will also provide timely, worldwide support to the Department of Defense in resolving accidents or significant incidents involving nuclear weapons in DoD's custody. Scientists, engineers, technicians, health physics and safety professionals from the National Laboratories and production facilities make up the ARG team. These skilled professionals from 30 different areas of technical expertise are ready to respond immediately. ARG members deploy with highly specialized, state-of-the-art equipment is used for monitoring, assessing or removing nuclear weapons, components or debris. Once the weapon leaves the site, the ARG mission is complete. Monitoring and assessment activities would most likely continue using other DOE/NNSA assets such as the Aerial Measuring System (AMS), the Atmospherical Release Advisory Capability (ARAC), the Federal Radiological Monitoring and Assessment Center (FRMAC), the Radiological Assistance

Program (RAP), and the Radiation Emergency Assistance Center/Training Site (REAC/TS).

The Aerial Measuring System (AMS) aircraft carry radiation detection systems, which provide real-time measurements of ground and airborne contamination - even very low radiation levels. AMS can also provide detailed aerial photographs and multi-spectral imagery and analysis of an accident site. AMS provides a rapid response to radiological emergencies with helicopters and fixed-wing aircraft equipped to detect and measure radioactive material deposited on the ground and to sample and track airborne radiation. The AMS uses a team of DOE/NNSA scientists, technicians, pilots and ground support personnel. Maps of the airborne and ground hazards are developed very rapidly which enables the scientists to determine ground deposition of radiological materials and project the radiation doses to which people and the environment are exposed. This information gives the decision-making officials, e.g., the Federal Emergency Management Agency (FEMA), the Environmental Protection Agency (EPA), and state, local, or Tribal emergency management officials, information they need to effectively respond to the emergency. The AMS capability can also be used to locate lost or stolen radiological materials.

The Atmospheric Release Advisory Capability (ARAC) role in an emergency begins when a nuclear, chemical, or hazardous material is released into the atmosphere. ARAC's main function is to provide near real-time assessments of the consequences of actual or potential radiation releases by modeling the movement of hazardous plumes to provide emergency response officials with the vital immediate information they need to rapidly evaluate airborne and ground contamination projections and thus effectively protect people and the environment. ARAC staff have vast databases available for a variety of data, including: a worldwide library of potential accident sites such as nuclear power plants and fuel-cycle facilities and a terrain database covering most of the world at a resolution of one-half kilometer.

Upon receiving a request for support, ARAC's specialists begin downloading the most recent regional and site weather data for input into the model calculations. On-scene emergency response officials provide critical information such as the time and exact location of the release and the type of accident or incident causing the emergency. After ARAC team members have downloaded the regional weather information and received site input, computer codes simulate the release from the explosion, fire, vent or spill with dispersion models, which show the spread of the material. These dispersion models take into consideration the effects from the local terrain or topography and complex meteorology. ARAC staff scientists prepare graphic contour plots of the contamination overlaid on the local maps. These plots are distributed to emergency response officials and also provided to DOE/NNSA response teams such as: AMS, ARG, FRMAC, RAP, REAC/TS, and NEST.

In addition to accidental radiological releases, ARAC has assessed natural disasters such as volcanic ash cloud and earthquake-induced hazardous spills, manmade disasters such as the Kuwaiti oil fires, and toxic chemical releases from a wide spectrum of accidents.

The Federal government maintains an extensive response capability for radiological monitoring and assessment. In the unlikely event of a major radiological incident, the full resources of the U.S. government can support state, local and Tribal governments. The FBI, as the Lead Federal Agency for domestic incidents, is responsible for leading and coordinating all aspects of the Federal response. DOE/NNSA may respond to a state or LFA request for assistance by deploying a RAP team. If the situation requires more assistance than RAP can provide, DOE/NNSA will alert or activate a Federal Radiological Monitoring and Assessment Center (FRMAC). FRMAC activities include: coordinating Federal offsite radiological environmental monitoring and assessment activities; maintaining technical liaison with state, local and Tribal

governments; maintaining a common set of all offsite radiological monitoring data; and providing monitoring data and interpretations to the LFA, state, local and Tribal governments. The main DOE/NNSA emergency response assets that supplement and are integrated into FRMAC capabilities are: RAP, ARAC, AMS, and REAC/TS. These assets are employed to detect and monitor radiation, measure the concentration of radiation in the air and on the ground, and to evaluate current weather conditions and forecasts, which may affect the radiation impacts. Other Federal agencies provide key professionals specializing in technical areas of importance to the Federal monitoring assessment activities.

The Radiological Assistance Program (RAP), established in the late 1950's, is composed of 26 teams spread across the United States, RAP is often the first-responding DOE/NNSA resource in assessing an emergency situation and advising decision-making officials. A RAP response is tailored based on the scale of the event. Specific areas of expertise include: assessment, area monitoring, and air sampling, exposure and contamination control. RAP team members are trained in the hazards of radiation and radioactive materials to provide initial assistance to minimize immediate radiation risks to people, property, and the environment. Their equipment includes the most advanced radiation detection and protection equipment available.

Since 1980, the Radiation Emergency Assistance Center/Training Site (REAC/TS) has been a World Health Organization Collaboration Center for Radiation Emergency Assistance. REAC/TS focuses on providing rapid medical attention to people involved in radiation accidents and is a resource to doctors around the world. DOE/NNSA's REAC/TS radiation experts are on call 24 hours a day for consultation to give direct medical and radiological advice to health care professionals at the REAC/TS treatment facility or an accident site. If needed, additional REAC/TS physicians and other team members can be deployed to the accident scene. This highly trained and qualified team can provide advice regarding assessment and treatment of contamination, conduct radiation dose

estimates, diagnose and provide prognosis of radiation-induced injuries, conduct medical and radiological triage, perform decontamination procedures and therapies for external and internal contamination, and calculate internal radiation doses from medially induced procedures.

REAC/TS is also the recognized center for training national and foreign medical, nursing, paramedical, and health physics professionals for the treatment of radiation exposure. As a World Health Organization Collaborating Center, REAC/TS is prepared to serve as a central point for advice and possible medical care in cases of radiation injuries; set up a network of available equipment and staff specializing in radiopathology; develop medical emergency plans in the event of a large-scale radiation accident; develop and carry out coordinated studies on radiopathology; prepare radiation documents and guidelines; and provide consultation or direct medical assistance to foreign governments if an actual radiation accident occurs.

In summary, the DOE/NNSA nuclear/radiological response capabilities are critical in any domestic response to a nuclear/radiological incident, but they are also vital to the DOE and NNSA's ability to respond to an accident or incident within the weapons complex or nuclear energy sector. With the teams organized as they are now, subject to the call of the Secretary of Homeland Security, they can continue to function to support DOE and NNSA and Homeland Security in an efficient, cost-effective manner.

The DOE/NNSA has more than 50 years of nuclear weapons experience that continue to provide the nation with an extensive base for science & technology, systems engineering, and manufacturing that has application across a broad set of national security missions, including homeland security and counter terrorism. Creation of a cabinet level Homeland Security agency holds promise for dramatic acceleration of improved capabilities against domestic threats. We in the

DOE/NNSA are committed to the success of this new Department, and will work to facilitate it.

I would be pleased to answer any questions.